

USING MEDICINES WISELY

The medicines information pharmacist's role

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This overview of medicines information, includes the type of activities undertaken, and the resources, skills and training required to provide an MI service

Medicines information (MI) can be defined as the provision of unbiased, evidence-based and critically evaluated information about medicines, in an attempt to improve patient care.

MI was previously known as "drug information" but this term was phased out in 2000 as part of the strategy "Better information for managing medicines", which was published in April of that year.¹ This was because "drug" had become associated with drugs of abuse, and after wide consultation the name of the service was changed to MI.

■ BACKGROUND

The specialty of drug information developed in the late 1960s and early 1970s in response to the changes in the types of medicines being marketed, the amount of information available and the changes in pharmacy services as a result of the Noel Hall report.² At this time, the number of new medicines not only increased enormously, but they were also more potent; the therapies used were also more complex than had previously been the case. With these new medicines came an expansion in the medical literature. It then became a challenge to keep abreast of the latest developments in order to make appropriate decisions. This was especially true of the emerging specialty of ward pharmacy. The drug or medicines information service was established to meet the demand for evaluated independent information. As the service developed, a tiered structure was put in place, with ward (or clinical) pharmacists being supported by local information centres which, in turn, were supported by regional and national centres.³

Today, new medicines are evermore potent and complex, for example, pegylated interferon and gene therapy. Their introduction has been accompanied by a vast amount of new information. It has been estimated that, each year, about 20,000 biomedical journals

and 17,000 biomedical textbooks are published. Access to these publications may now be easier and faster but there is still a need for competent evaluation of the information contained in them. Although the role of clinical pharmacists has changed, there is still a need to make use of evaluated information in optimising drug therapy in patients.

■ ACTIVITIES

Pharmacists specialising in MI undertake a range of activities and the form these take is often dependent on the staff and resources available. As well as answering queries, the MI service includes the proactive provision of information (in paper or electronic format), adverse drug reaction reporting, provision of a medicines helpline for members of the public, support for drug and therapeutics committees (DTCs), training and education, and research. Some activities, such as enquiry-answering and support for DTCs, contribute to the clinical governance agenda in a trust. On the other hand, the use of customer satisfaction and peer review programmes contribute to the internal clinical governance of the MI service.

Enquiry-answering Providing answers to requests for information is an important part of the daily routine for all MI pharmacists. Questions may range from the mundane to the highly complex, but the answers given all contribute towards improving patient care. Enquiries are routinely classified as follows:

- 1 Administration/dosage
- 1 Adverse effects
- 1 Availability/supply
- 1 Choice of therapy
- 1 Identification
- 1 Interactions
- 1 Pharmaceutics
- 1 Pharmacology/pharmacokinetics
- 1 Poisoning

National and local data on the nature and quantity of enquiries are also classified under the above headings.

The types of enquiries received by an MI centre is a reflection of the types of enquirers using the service. For most MI services, the

enquirer is usually from secondary care eg, hospital pharmacists, doctors and nurses. However, enquiries from primary care are on the increase and may come from general practitioners, community pharmacists, community nurses and primary care pharmacists. The depth and type of information required often varies depending on the experience of the enquirer. A junior pharmacist starting a new clinical area may be looking for help in finding guidelines relevant to their new clinical specialty. On the other hand, a senior pharmacist may require help in gathering evidence to support the writing of guidelines. In the past few years, there has been a large increase in the number of enquiries relating to complementary medicines. This has most commonly related to herbal and homeopathic preparations. Enquiries are often about the side effects of these preparations or about any potential interactions with conventional therapy.

Local MI services benefit from local knowledge, which allows them to tailor their answers to the specific health care needs of their areas. Local MI services are also key access points for several national centres that provide detailed information on a variety of specialist areas eg, drugs in psychiatry, renal disease, pregnancy, alternative medicines, travel medicine, toxicology and poisoning. These national centres hold resources specific to their specialist area and receive enquiries referred from other MI centres.

Disseminating information (proactive)

There is an ever-increasing need for information on new drugs to inform decision making by prescribers and DTCs and to guide formulary preparation. MI pharmacists have the skills to identify relevant new information and its potential impact on services. MI has a role in the proactive production of a wide range of material, including new product assessments, bulletins and current awareness briefings. Some of this work is undertaken for local customers, such as DTCs, but many of these information products are disseminated nationally.

The United Kingdom Medicines Information Pharmacists Group (UKMIPG) new products scheme has been in operation since 1983. This has developed from the produc-

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tion of post-marketing assessments into quite a comprehensive process, which includes horizon scanning as well as pre- and post-marketing assessments. UKMIPG currently collaborates with the National Prescribing Centre in the production of pre-marketing assessments and in the production of selected post-marketing monographs. This is undertaken to prevent duplication of effort, ensure high quality and consistency of output and make optimal use of limited resources.

Adverse drug reaction reporting Spontaneous suspected adverse drug reaction reporting is one of the principal sources of information used in regulatory pharmacovigilance to identify drug safety hazards. The UK reporting scheme, known as the "yellow card" scheme, has been in operation since 1964. MI pharmacists encourage and guide doctors, dentists and pharmacists in the completion of these reports to improve the quality and quantity of reporting. In several regions, adverse drug reaction reporting schemes are co-ordinated by MI pharmacists, who also provide education, training and support on identifying and reporting adverse reactions for all health care professionals.

Managing MI helplines In general, MI services are available to members of the public, although they are not advertised as such due to the presumed inability to meet the demand because of a lack of resources. However, medicines helplines have been set up by local MI services in 20 per cent of hospitals to provide an enquiry-answering service for hospital patients only. The helplines are normally available during working hours and are advertised to patients, who are encouraged to ring up with any queries about their medicines. The majority of questions asked by patients relate to reasons why they have been prescribed their medicines, why such medicines are stopped, and the reason for any dose changes. In the past few years, drug-herb interaction questions have also increased. On the other hand, questions on drug-drug interactions or adverse effects are not as common.

NHS Direct in England and Wales (and in the future, NHS24 in Scotland) provides an advice line staffed by nurses which offers advice to people about health, illness and the NHS. A proportion of the calls received by NHS Direct is referred to the regional MI service for specialist information. NHS Direct does not have access to the information that is available to MI services in hospitals in order to be able to answer patient-specific enquiries.

Supporting DTCs MI services are often involved in supporting their local DTCs. This may include the maintenance of formularies and prescribing guidelines, or assistance in the production of shared care protocols and audit schemes. The managed entry of new drugs (see pp159-63) is an

increasing workload for DTCs and MI pharmacists often take a lead role in this.

Training MI pharmacists are involved in the training and education of all levels of pharmacy staff including pharmacy technicians, preregistration trainees, undergraduate pharmacy students and pharmacists undergoing postgraduate training (see below). Training is also given to nurses, doctors and other health care professionals in several areas, ranging from basic pharmacology to the critical evaluation of papers.

Undertaking research The MI service supports practice research in other areas and by other disciplines and professions on an ongoing basis through routine enquiry-answering. This can vary from searching for work previously undertaken within the research area to the sourcing of material to be used in clinical trials. MI research and developments are reported and discussed at the annual UKMI conference, which is attended by over 200 MI pharmacists.

RESOURCES

The level of resources held by an MI centre depends on the services provided, existing sources of information and of course, the amount of money available. The sources of information available are classified as tertiary (general reference books), secondary (indexing and abstracting references) and primary (journals). A list of recommended tertiary sources is to be found in UKMIPG's manual (found in all MI centres in the NHS) or website (www.ukmi.nhs.uk) with individual centres keeping the sources that are specific to the specialties in their base hospital.^{3,4} Care is taken to ensure that the current editions of textbooks are kept so that only the most up-to-date information is used.

Computer searching of online secondary indexing and abstracting services has been available for many years. However, the initial systems were expensive and not user-friendly. In addition, they were not easily accessible to most health care professionals. Many of these barriers have now been removed and technological improvements have led to these resources becoming widely available.⁵ Computer-assisted sources now include 'Martindale' on CD-ROM (tertiary source), Medline, Pharm-Line and IDIS (secondary sources), and the online versions of *BMJ* and *The Lancet* (primary sources). These require much less space than hard copies and searching through them takes less time. The advent of the internet has made available a lot of information that can easily be downloaded or printed. Searching may be easier and quicker but the need for good searching techniques, using the appropriate keywords and descriptor terms remains vital. This is especially true when using the

internet, where the origin and appropriateness of the information must also be confirmed.

A useful resource available to all MI services is their past enquiries. These are usually stored on computerised databases that are either customised for the centre or they may be archived using one of the commercially available packages such as DiScan, Cinders or PracSys.

SKILLS

Pharmacists in MI require various skills, including problem solving, literature evaluation and communication.

Problem-solving skills are involved in conducting an effective and efficient literature search. This includes not only which sources or databases are to be searched but also the correct search terms to be used for the different sources. If the search is not properly carried out, information that is relevant to the enquiry may be missed.

The ability to evaluate information critically is an essential skill. The purpose of such evaluation is to determine the value and reliability of the information collected. Traditionally, the main source of information was papers published in medical journals or information provided by drug companies. This has changed in recent years to include information retrieved from the internet. Evaluation skills include good analytical techniques and an understanding of statistics and pharmacoeconomics.

Communication skills are required right from the start of an enquiry to ensure that the correct question is obtained. An understanding must be reached as to exactly what the enquirer wants to know. The information that should be sought includes why the question is being asked, what the information will be used for and when the information is required. A patient-specific enquiry requires an answer that reflects the clinical picture for that patient. The factors to be considered include concomitant diseases, renal and liver function, and the setting under which the care is to be provided, that is, primary or secondary care.

The skills required to explain complex medication problems to patients are different from those that are needed in explaining such problems to health care professionals. Effective team participation skills are also often required to influence prescribing patterns for a whole group of patients rather than only for individual patients. For example, this could be by participation in a working party to provide a protocol for the use of low-molecular weight heparins in deep vein thrombosis prophylaxis for oncology patients. Such protocols are usually the result of a working party decision rather than that of one individual. Effective team participation skills also includes group presentation skills and the ability to work

effectively on committees.

— TRAINING

Traditionally, the UKMIPG manual has been used to provide training in MI.² Three levels of staff are catered for by this manual. They are:

- 1 Level 1 for preregistration trainees, inexperienced pharmacists or pharmacists with no previous MI training
- 1 Level 2 for pharmacists in charge of MI services
- 1 Level 3 for MI specialists with regional responsibility or with a high level of MI experience

The training manual has clear aims and objectives, as well as checklists and training exercises to be completed.

A national introductory training course is also available biannually and part of this training is provided by experienced MI pharmacists.

MiCAL is a training package available on CD-ROM for the training of junior staff. This is a self-directed learning package that gives a general introduction to the MI service and then focuses on answering enquiries.

Recently, a competency framework was developed for pharmacists working in MI centres in the NHS.⁶ The aim of the framework is to identify the competencies that individuals working in MI already have or need to develop in order to carry out their work effectively, now and in the future.

The framework was developed to aid continuing professional development at an individual level, help managers and MI pharmacists, to identify ongoing training and development needs, and provide a framework to support local recruitment and appraisal processes. The framework is divided into four competency areas: delivering the MI service, working with people, working with information, and seeing the wider context. Each of the competency areas contains three or four competencies, and each competency is split into two levels: level 1 for junior MI pharmacists and level 2 for senior MI pharmacists.

A number of behaviour statements represent the sort of behaviour that is expected. For example, the competency area of "delivering the work" includes the competency of "delivers own work to time". This has a number of behaviour statements including "delivers work within agreed deadlines", "prioritises own work and adjusts priorities in response to changing circumstances" and "manages multiple tasks and routine work".

For experienced MI pharmacists, a masters degree in pharmaceutical information management is available from City University in London. This course provides postgraduate education for pharmacists in the pharmaceutical industry or the health service engaged in

pharmaceutical information work.

— FUTURE DEVELOPMENTS

The document "Better information for managing medicines",¹ published in April 2000, was endorsed by the Departments of Health in the four home countries of the UK. Three strategic aims are identified: extending the service available to primary care, developing the service in secondary care, and providing support at the national level. An implementation framework was also published in August 2000.⁷ The framework acts as a guide to the development of priorities for achieving strategic aims over the five-year tenure of the strategy.

The strategy is based on developing MI to meet the varying needs of the service's different users. Many of the changes envisaged when the strategy was launched two years ago have already occurred, such as the use of the title medicines information, the establishment of the use of e-mail to distribute documents and minutes, and the production of a framework for providing services to primary care groups and trusts. However, many of the changes envisaged have not yet occurred, but should do so over the remaining three years.

Primary care Traditionally, MI services have been established for hospital-based secondary care activities. Reforms in the NHS, particularly in relation to primary care, have led to changes in the manner in which services are provided. The appointment of pharmaceutical and prescribing advisers along with community pharmacy service development pharmacists has increased the need for a significant level of medicines information support in primary care. Currently, MI support for these services is not uniform across the UK and the challenge for the future will be to ensure that primary care has access to the same level of MI services as is currently available to secondary care. With the implementation of independent nurse prescribing and the current proposal for supplementary prescribing by nurses and pharmacists, training and support for these groups will continue to expand.

Secondary care In secondary care, the challenges include ensuring that the same level of MI service is available across the whole of the UK. The use of the internet and hospital intranets to capture enquiries and disseminate information and advice, and the use of computerised databases is changing the way MI services are provided.

There have also been changes in the staffing of MI centres, with many centres including MI technicians as part of their team. Technicians are able to maintain databases, perform systematic literature searches, receive and answer certain categories of enquiries under supervision, and co-ordinate audits of enquiries. A UKMI

accredited training scheme for pharmacy technicians who work within MI was launched in September 2001 and the first batch of students started on the scheme earlier this year.⁸ The accreditation is valid for two years, after which the technician must apply for re-accreditation.

Support at national level MI already provides support at a national level by working with the National Prescribing Centre and undertaking a horizon-scanning function. The development of training and support programmes for NHS Direct (and the imminent NHS24) is already under way, but this is still expanding. More work is required to ensure that appropriate information products are available through the National Electronic Library for Health and to provide support for evidence-based practice and clinical governance at the national level.

— CONCLUSION

The MI service may have changed tremendously since it began, but it is still working to the same principles of supporting safe and effective prescribing by providing the most appropriate evidence-based information to benefit the patient.

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